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ABSTRACT

Two pilot telecourses were offered in fall 1991 at Rochester Institute of Technology and Gallaudet University. The course "Black Civil Rights in the Twentieth Century" was taught by a Rochester faculty member with a Gallaudet teacher as resource or co-teacher. The other course, "Mass Media and Deaf History," was taught from Gallaudet with a resource teacher at Rochester. Forty-five students completed the civil rights course and 21 completed the deaf/media course. Instructional delivery included captioned videotapes and movies, assigned readings, and class discussions through computer conferencing. Students were interviewed about course effectiveness and completed rating surveys. Students and faculty agreed that the technology was too cumbersome and slow. Students were otherwise divided into those who were generally satisfied and would enroll in such a course again, and those who were not satisfied and missed the regular support of peers and teachers. Recommendations are offered for course improvement. Four appendixes contain the two course surveys and detailed tables of findings. Four tables summarize information in the body of the report. (SLD)

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A FORMATIVE EVALUATION OF TWO GALLAUDET UNIVERSITY/ROCHESTER INSTITUTE OF TECHNOLOGY COURSES OFFERED VIA TELECONFERENCING

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Readers Please Note: This report is color coded

Want to spend 5 minutes and get a quick overview?	*Read the Cream Colored Pages*
Have 15 to 20 minutes to get a more detailed picture?	*Read the Cream and Blue Pages*
Have about an hour for an in-depth review of student perceptions?	*Read Cream, Blue & White Pages*

A Formative Evaluation of Two Gallaudet/RIT Telecourses

Introduction

Telecourses have expanded the options for addressing individual students' particular learning styles and needs. Yet, it remains a fact that both faculty and students have widely varying perspectives about the value of this instructional delivery method.

Two pilot telecourses were offered Fall, 1991 with students and faculty at Rochester Institute of Technology and Gallaudet University. The course, "Black Civil Rights in the Twentieth Century," was taught by a RIT history professor with a Gallaudet "resource" or co-teacher. A professor at Gallaudet University taught "Mass Media and Deaf History" with a RIT faculty member as "resource teacher." The resource teachers were to facilitate student access to and utilization of the delivery system; they were not to provide instruction per se.

Both courses were open to students at Gallaudet University and Rochester Institute of Technology/National Technical Institute for the Deaf. The maximum student enrollment for each course was set at 26, with the goal of having equal numbers of Gallaudet and RIT students enrolled in each course (see Table 1).

Table 1

Students Who Completed (and Withdrew from) the Courses

	Black Civil Rights	Deaf Media	Total
RIT/NTID	13 (1)	11 (1)	24 (2)
Gallaudet	11 (2)	10 (2)	21 (4)
Total	**24** **(3)**	**21** **(3)**	**45** **(6)**

The instructional delivery involved captioned videotapes and movies, assigned readings using a variety of print materials, and class discussions via computer conferencing technology (electronic mail over Internet). Students had computer access days, evenings, and weekends. Students were given an orientation prior to the beginning of the course on how to use Internet. All assignments were read and graded through the use of electronic mail.

At the end of the course, students from each institution were asked to complete an "instructional rating survey" (see Appendix A) as well as participate in an interview regarding their satisfaction with the method of instructional delivery (Appendix B is the interview protocol). The interviewer was a student in the Joint Education Specialist Program at NTID who had been given training in interviewing skills and who had excellent sign language skills. The interviewer was also asked to provide feedback summarizing the information gained from the student interviews. Additionally, comments, insights, and recommendations regarding the course delivery system were solicited from the two primary faculty for the courses.

Method and Data Sources

This inquiry was guided by three primary evaluation goals:

- Providing the instructors of the course with information that would be useful to them in modifying and improving their courses if the courses are offered in a similar format in the near future.
- Providing information to decision makers concerning the feasibility of offering courses through a distance learning format.
- Exploring the personal and psychological differences between students who enjoy taking a course under this format and those students who did not.

The following information was collected to meet those goals.

(1) Near the end of the course, students were requested to complete an "instructional rating survey" that asked them to rate various aspects of the course and instructional delivery method.

(2) A graduate student interviewed a sample of the students from NTID and Gallaudet to obtain their perceptions of the strengths and weakness of the particular courses offered this past quarter and of the instructional delivery system in general.

(3) Students who were interviewed also completed a personality self-assessment which was developed from the **Educational Technologies Predisposition Assessment** (ETPA) (Scherer, Young & McKee, 1990)

(4) The graduate student interviewer also shared her perceptions with the evaluators, both concerning the pro's and con's of this type of instructional delivery and the student who seemed to enjoy this type of course.

(5) The two faculty members shared their perceptions of the strengths and weakness of the course with us.

Summaries of all the questionnaires, interviews and comments are presented in the next few pages of this report. Recommendations arising from this information follow the data summary. Copies of all instruments, including the interview questions, can be found in the appendices.

End of Course Student Ratings

Eight students returned completed student ratings of the course. The student ratings form contained questions asking for students perceptions of the utility and difficulty of the course, questions related to the personality and teaching style of the instructor and questions related to the use of teleconferencing as instructional delivery system. However, the rating forms were returned anonymously and it was not possible to distinguish which of the two courses the students were enrolled. Since the perceived utility and difficulty is "course specific," only those questions related to teleconferencing are reported here. Table 2 summarizes student responses to the objective items and Table 3 reports the responses to the one open-ended item asking for comments, concerns or suggestions. Some things to note in Tables 2 and 3 are:

- Only about half of the students responding to the end of course rating survey stated they felt comfortable communicating through the computer. Most students (87%) said they missed seeing other students in face-to-face situations and half agreed with the statement that they sometimes felt isolated talking only to a computer.

- However, 75 percent of the students enjoyed sharing ideas with other students and 100 percent of the students responding to the survey felt the video tapes and other media used by the instructors was valuable.

- Students were evenly divided on whether they thought they had more interaction with their instructor in this type of course with thirty-seven percent agreeing with the statement they had more interaction than in a regular course, thirty-seven percent disagreeing and 25 percent unsure.

- Students were also divided on whether or not they have more interaction with other students in these type of courses, thirty-seven percent felt they did have more interaction, but fifty percent did not.

- Students did recognize that it was up to them to manage their time more in these types of courses and half (50%) of the students agreed it was more difficult for them to keep up assignments in the teleconferencing course.

- Although half of the students responding said it was important to have a Resource Person on campus, only twelve percent of the students agreed that the Resource Person helped them keep up with the course and twelve percent also said it was easy to meet with the resource person. Thirty-seven person of the students felt it was not easy to meet with the resource person and that the resource person was not helpful in keeping up with the work of the course.

- Fifty-percent of the students responding to the rating survey agreed with the statement that the course they took via teleconferencing was an excellent course and fifty percent also agree that they would tell their friends to take such a course.

- However, only thirty-seven percent of the students agreed that they would like to take another course in the same way. Twenty-five percent of the students felt they would not like to take another such course and twenty-five percent of them were not sure.

- The only comments students offered for improving the course was to add a weekly discussion session. Students expressed some frustration with the technical difficulties of interacting via the VAX.

Table 2

Student Ratings of Computer Conferencing Courses

Items	Frequency of Responses				
	Strongly Agree or Agree	Not Sure	Strongly Disagree or Disagree	Not Applicable or Omits	Item Mean
How much did you enjoy taking a course via the computer?					
I felt comfortable communicating through the computer.	50.0%	12.5%	37.5%	0	3.25
I missed seeing other students in face-to-face situations	87.5%	0	0	12.5%	4.43
I sometimes felt isolated only talking to a computer.	50.0%	0	50.0%	0	3.00
I enjoyed sharing ideas with students from another	75.0%	25.0%	0	0	4.25
The video tapes and other media used by the teacher added to the value of the course.	100%	0	0	0	4.50
How did this computer course compare to regular classroom courses?					
I thought it was easier to communicate using the computer than in a regular classroom.	25.0%	12.5%	62.5%	0	2.75
I felt I had more interaction with my teacher in this course than in other courses I have taken.	37.5%	25.0%	37.5%	0	3.13
I felt I had more interaction with other students in this course than in other courses I have taken.	37.5%	12.5%	50.0%	0	2.63
It was up to me to manage my time more in this course.	75.0%	0	12.5%	12.5	4.29
It was more difficult for me to keep up with assignments in this course.	50.0%	12.5%	25.0%	0	3.63
How valuable was the Resource Person?					
I felt it was important to have the Resource Person on campus.	50.0%	12.5%	0	37.5%	4.20
The Resource Person helped me keep up with the course.	12.5%	12.5%	37.5%	37.5%	2.40
It was easy to meet with the Resource Person whenever I needed help.	12.5%	12.5%	37.5%	37.5%	2.40
What is your overall evaluation of this course?					
This was an excellent course.	50.0%	25.0%	25.0%	0	3.63
I would tell my friends to take a "computer conferencing" course.	50.0%	25.0%	12.5%	12.5%	3.71
I would like to take another course in the same way.	37.5%	25.0%	25.0%	12.5%	3.43

* 5 = Strongly Agree, 4 = Agree, 3 = Not sure, 2 = Disagree, 1 = Strongly Disagree

Table 3

Student Responses to Open Ended Questionnaire Item

Please write any general comments, concerns or suggestions about improving this course

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Verbatim Responses

- Maybe it would be nice to have once a week to discuss the class and then do the work on your own. I find it hard for me to express myself on the Vax instead of using ASL. Deaf people need to depend on eyes and hands. Therefore I suggest we have more discussion.

- RIT's Vax is a very slow machine when it is hooked up with Gally's VAX. It was difficult for me. I would have to force myself to do my work in the morning when it is [response time] a little better than in the evenings.

Student Interviews:

Table 4 presents a complete listing of the responses students gave to all interview questions related to the instructional delivery system of the course. Students are identified by letter, so the individual variation in student reactions to the delivery system can be followed from question to question. Students comments are also divided by college (Gallaudet and RIT). The four Gallaudet students were all enrolled in *Black Civil Rights in the Twentieth Century*, one RIT student interviewed was also enrolled in *Black Civil Rights*, all of the other RIT students were enrolled in *Mass Media and Deaf History*. Nine of the interviewees were deaf and one was hearing.

Only responses to those interview questions related to the delivery system of teleconferencing are presented in Table 4, student responses to the remaining interview questions can be found in appendices C and D. Table 4 is lengthy (10 pages) however, the information is useful in examining the perceptions of the students and the evaluators felt it was worth presenting the information in its entirety.

Some important things to note in Table 4 are:

- Most students registered for the teleconferencing courses because they were interested in the content or the courses fit into their schedules. Only three of the ten students, mentioned that they knew the course would be offered via the computer when they registered.
- Students' pre-course expectations varied according to the course for which they registered and whether or not they knew the course was being offered via the VAX. Most students said they had no pre-course expectations other than to learn more about the subject matter of the course. Three students said they expected to learn how to use the Vax better.
- Students who enjoyed the delivery systems of the two courses said their opinions of the course improved throughout the quarter. However, students who did not enjoy the delivery system felt that they became frustrated as the quarter went on and they said the work load was great.
- When asked if they were glad they took a course offered via the computer, students again divided themselves into two clear groups. The students who enjoyed the course said yes, the course was "different", "I feel more comfortable [with discussions through the vax]", "It helped my English skills develop". Students who did not enjoy this type of delivery system were more negative. "No, I wanted to get feedback from the instructor." "No, I did not like the Vax."
- When asked if this type of course was better or worse than a traditional classroom centered course, most students listed some positive and negative aspects of the delivery method. The best aspect most frequently mentioned was the opportunity to set your own work schedule and that such courses require the development of independence and self discipline. The worst aspects most frequently mentioned was the lack of face to face contact that meant discussions were not as "spontaneous."

- Several students said the course improved their time management skills. Other students felt frustrated without the face to face support of other students and the instructor.

- When asked what they did to structure and pace the work of the course, most students gave the interviewer their weekly schedule; which days they watched the videotapes, which days they typed on the Vax , etc.

- There was a great deal of variation in students' perceived interactions with their instructor. Even responses from students in the same course, who were both generally positive about the experience ranged form "I had a lot of interaction with him." to "I did not have a lot of interactions with him...he would respond to me but that is it." Some students clearly did not perceive communication via the Vax as interaction: "I never saw the teacher .....there was not any interactions, too impersonal."

- The perceived interactions with the resource person also vary greatly. Generally, the Gallaudet students saw the resource person as being helpful and available while the NTID students felt the person was not helpful or not available.

- In general, students seemed to feel more positive about interactions with their peers than with their instructor. Almost all the students said they enjoyed reading the different opinions from the other students. One student noted that deaf RIT students tend to come from a wider geographic area than hearing RIT students and the student found it interesting reading the comments from students from other areas of the country.

- Most students did not seem to perceive the course(s) as offering them any insights about their own learning styles. When asked about if they had learned anything about their own learning style or needs, most said there was not difference "in learning" between this type of course and traditional courses.

- Students were asked if they would take a course using this instructional delivery method again. This question most clearly divided the ten students interviewed into two groups. Three students said no, six students said yes and one student replied "maybe, if it was an interesting course."

- When asked what future applications they see for course taught this way, students again divided themselves into two groups. Responses ranged from "I don't feel there are any good applications. A lot of the other students feel the same." to "Sociology, Psychology, class related to history, Deaf Life...not biology, it is too complex."

- Most students felt social science or discussion classes would fit this type of format. However, one student said "Math would be interesting. I would like to have engineering classes on the computer. It is difficult sometimes to have to watch the interpreter and sometimes I miss things. I wish the teacher would sign for himself or have it on the computer. I prefer [the communication to be] between the teacher and me or me and the computer. I do not like the middle person."

In summary, the ten students interviewed divided themselves into two distinct groups (with one person in the middle). Students who enjoyed the format also felt more positively about the instructor, interactions with other students and the independence afforded by such a course. Students who did not feel comfortable with the format were frustrated by the lack of personal contact with both the teacher and other students and less tolerant of the difficulties caused by slow response time and other equipment problems.

Table 4

Summary of Student Interviews

Questions and Complete Responses*

1. Why did you register for this particular course?

GALLAUDET STUDENTS

Student A: I wanted to learn about MLK, Malcolm X, famous women, and what they had done. I did not know it was on the vax. It did not say in the course schedule.

Student B: I took the class for enjoyment and it sounded interesting. I did not know it was on the vax.

Student C: I wanted to learn about Black history - MLK, Malcolm X, etc. In high school they did not offer much but I did not know it was on the vax. It was fine on the Vax, it was something new, made me feel free and independent.

Student D: The class sounded interesting. I did not know it was on the computer before I registered for the class but after I found out I was more interested in taking the class. It puts the responsibility in my own hands. It also tests my time management skills. I can go to "class" whenever I want. I wish all my classes were like that.

NTID/RIT STUDENTS

Student E: It fit into my schedule and the class sounded interesting.

Student F: I wanted to learn how to use the vax more. I was also interested in Mass Media and Deaf History.

Student G: It sounded interesting. I was interested in Mass Media and Deaf History. Also, it was on the computer. And I wanted to meet new people, not only from RIT but also Gallaudet.

Student H: I need it for my Liberal Arts degree. Plus, I am interested in Deaf history. I did not know anything about deaf culture when I arrived here.

Student I: I thought it was a neat idea because I am a vax freak. I know a lot about Deaf culture but I do not know about mass media and the deaf.

Student J: I wanted to try something new, to challenge myself. And I was curious about Deaf history.

2.Please think back to your first group meeting about this course. What did you expect?

GALLAUDET STUDENTS

Student A: I did not expect much. I just wanted to learn about Black history. But then I found out it was through the vax. I told myself I would just try it and see if I like it or not.

Student B: At first, I felt weird when I found out it was through the vax. But Prof. Kinner explained everything clearly. I worried whether I would do okay or not. It was a cool class. I did not have any real expectations.

Student C: Before classes started I went to go see Prof. Kinner about the course. He explained that it was a computer course. I felt weird. I am used to discipline from the regular classes but this class made me more independent.

Student D: I did not know about the vax before I registered for the class. It was difficult for me to get used to because it was all new to me. Also, we had a lot of complex things to do.

Table 4 (cont.)

Summary of Student Interviews

Questions and Complete Responses*

NTID/RIT STUDENTS

Student E: I did not have any expectations. Out of all the girls, all but two of us were deaf.

Student F: I had no expectations. I didn't know the class was going to be all on the vax.

Student G: I expected to learn how to use the computer correctly. I expected to work. It was fun in the beginning.

Student H: I was expecting to see films, movies. I was really curious about mass media and deaf history.

Student I: I expected to work on the vax a lot and also I know I would be doing a lot of reading too.

Student J: At first, I was confused about what was expected of me. but then as the class continued and I read the syllabus, I understood.

3. How did your expectation and opinions of the course change over the quarter. What do you think most changed your opinion?

GALLAUDET STUDENTS

Student A: My opinion changed most by having a free hour during the day. I did not have to worry about going to class and being there on time, etc... It was a good break from the pressures of my other classes. But I was puzzled at first with the style of the course. I wondered if the teacher did not have any time to teach or if he cannot find a classroom and that is why the course was ut onto the computer. He confused us as to why the course was through the vax and not in a classroom.

Student B: My opinion did not change.

Student C: At first, the teacher explained things and they seemed complicated. I felt a little stand-offish from the course because I added the course late. I did not have the RIT vax account. But it was great having Prof. Kinner here.

Student D: I did not have any problems. As the course continued it became much easier. I feel that the teacher was a fair grader. I like it better when it became easier to use the computer. But I did not like how it took a long time to type. I would type something in the computer and it would not show up on the screen. It would take 5-30 mins to show up on the screen.

NTID/RIT STUDENTS

Student E: I got a lot more out of it than I thought I would. It turned out to be a very interesting class. The textbook went along with the videos. the information provided helped to change my opinion for the better.

Student F: I didn't like it. It was too impersonal, no emotions. It was not interesting for me.

Student G: I wish the students would have done their homework early. It is no fun to do it at the last minute. I wanted to see their opinions and get feedback, but I always had to wait. I didn't like that. I wish they had some rules or something that made students do homework on time and not at the last minute. I understand it is the first time this course is offered. Maybe next time it will be better.

Student H: My expectations changed. I had to do the homework all at one time. I could not break it up over a period of time. It should have been six credits instead of four.

Student I: I found out there was a lot of reading and had to watch a lot of films. I did not realize there were a lot of deaf people in films a long time ago.

Student J: My opinion changed because the vax was very frustrating to use. They should have a 2-3 hour meeting for the first time instead of one hour. It was very frustrating. I did know exactly how to use the vax. I would get cut off when I tried to call Gally.

Table 4 (cont.)
Summary of Student Interviews

Questions and Complete Responses*

6. Are you glad that you took it as far, as the way it was taught? Why/why not?

GALLAUDET STUDENTS

Student A: Yes, it was a wonderful opportunity to use the vax. It was a different style class. I will know what to do in the future if I ever take a class like this again. It also helped my English skills develop too. I was constantly writing for a purpose.

Student B: Yes, I feel I had enough time to go through the vax and respond to the discussions.

Student C: Yes, but I did not receive as much feedback as I would have liked. For example, I feel I would have received more feedback from a traditional class compared to this course on the vax.

Student D: Yes, I feel I can be myself. I feel shy in the traditional classroom because other look at me when I am talking. It make me feel self-conscious. I prefer discussions through the vax because I do not have to worry about people looking at me. I feel more comfortable.

NTID/RIT STUDENTS

Student E: Yes and no. I got as much information whether I got it from the Vax or the classroom. It lacked in the way of spontaneous discussion. It would have benefitted from a classroom. But then again people's thoughts would be a little inhibited.

Student F: No, it was very uninteresting for me.

Student G: I wish they had some way of putting the pictures of each person on the computer so I would know what they looked like. I miss the expressions and the way students say things.

Student H: No, I wanted to get feedback from the professor. I would ask him a question then I would have to come back later for the response. I prefer face-to-face. Also, some students did not respond as much as some other students did. It was unequal. But in a lecture style, I think it would be more equal.

Student I: Yes, because I like to use the vax. But it is effective with students who like to use the vax but not for those who don't.

Student J: No, I did not like the vax. It was very frustrating to get cut off when typing. The feedback was different. I did not know who was saying what. In a classroom I can see the students' faces, their opinions, etc. You can have a hot discussion in class but on the vax you just sit and face a computer.

7. How was this method, better or worse than the traditional classroom style of learning as far as you-yourself, are personally concerned?

GALLAUDET STUDENTS

Student A: For Better, I can work on my own time. I can work when I want. For worse, it takes too long to type into the Vax. I have to wait a long time to send information on the vax. Also sometimes it is nicer to be able to see the facial expressions of the students during the discussions. I also miss the group work in the regular classroom.

Student B: For better, I can do the work when I want to. I feel more free with this class. Also, it is something different from the traditional class style. For worse, you can have a good discussion in the regular classroom. But it loses something on the Vax because there are not facial expressions. Also the discussions lose something because you have to wait too long for a response. the heat goes out of the "heated discussion."

Student C: For better, I can do the work when it is convenient for me. If something comes up, I don't have to worry about skipping class. I can just go. For worse, I can get lazy. I can put it off too easily. I have to have good disciplinary skills.

Student D: For better, If I have a questions now, I can ask that question now. I can enter anytime. I don't have to wait until the next class time. For worse, in some ways the lecture is better because if something is not clear then it is explained clearer in the lecture.

Questions and Complete Responses*

NTID/RIT STUDENTS

Student E: For better, the lecture style class you don't do as much outside of class. There was a lot more outside work than three hours in class. I think I put a lot more time into it. It was definitely worth it. For worse, the interactions between all of us was not enough. Too many times there was not as many opinions expressed. In the beginning, yes, but the spontaneous conversation was not there.

Student F: For better, nothing is better about it. For worse, it was very unmotivating, frustrating, and impersonal.

Student G: For better, at RIT classes, it is difficult to participate because I don't know when to raise my hand or get into a conversation. Also, regular classes have a set time to go but with the computer I can work on it whenever. For worse, if you put off the work, you are in trouble for the computer class. Teachers can also see your motivation, your facial expressions in class. They know when you come to class, etc... But on the computer, teachers cannot see that.

Student H: For better, assignment 1 & 2 were nice to put on the vax instead of typing and having to turn it in. It is easy to lose a term paper. but here it is on the vax. You cannot lose it. for worse, I am not there all the time. I have more important things to do. I wish there was a set schedule like every Tuesday and Thursday because this class got put off to the last minute often.

Student I: For better, I have to concentrate more and participate. In a regular class things can go by and you can daydream. But in the vax class you have to pay attention. for worse, it takes a lot of time to sit and read everything and then type. But I don't really mind. It was just a small problem.

Student J: For better, I do not have to go to class all the time. You learn more about how to use the vax and computer. For worse, you get disconnected too much.

8. Please tell us what this course was like for you without the traditional classroom interaction with the need to work independently.

GALLAUDET STUDENTS

Student A: no answer

Student B: This course improved my time management skills because I was responsible for getting the work done on time. I don't feel forced to go to class with this course. But I feel forced to go to class in the traditional course.

Student C: It helped me a lot. I could also transfer my time management skills I improved with this course over to my other courses.

Student D: My time management skills improved because I was bad before but I was responsible for my own time. it also helped me with other classes. I was forced to go in and use the vax.

NTID/RIT STUDENTS

Student E: The teacher helped a lot. He does a class count. There was a top group who was consistent, then the bottom group who only answered once or twice and there were some in the middle. He gave us the opportunity to be very organized. He had a class participation grade and that was how he decided if you kept up with the work.

Student F: I need more support from others in person to help me with things like the term paper.

Student G: It helped me work more independently. No, it did not bother me.

Student H: It helped me because if I am in a regular class and I am too tired, I can put the reading off and do it later. But here I had to sit down and do it.

Student I: This class taught me how to work on my own.

Student J: This class did not help me to improve my time management skills or anything. I don't feel anything has changed.

Questions and Complete Responses*

9. What did you do to structure and pace the course work in order for you to meet the course requirements?

GALLAUDET STUDENTS

Student A: I made a schedule for myself. In the afternoon, I would do my other homework. Then I would work on the vax last after everything on my to do list was finished.

Student B: For me, I would watch the videotapes on Friday or Sat. Then I would type on Sun. or Mon. Then Tues to Sat., I would read the vax and sometimes respond.

Student C: I would read and write down any questions I might have. Then I would watch the videotapes. Maybe I would understand the readings more clearly after I watched the videotapes. Then I would type onto the vax.

NTID/RIT STUDENTS

Student E: The Prof would give the questions at the beginning of the week on Sunday. I would read the book on Sat. or Sun. and then type on my questions, etc. on Sun. Other times, if I was really busy that week, then I would do it on Thursday.

Student G: I would do all my other work during the week so I could focus on the deaf history class on the weekends.

Student H: I always waited until the last minute to add things. That is just my style.

Student I: On Sundays, I would watch the movies and read. Then usually on Wednesday I would type on the vax. Most of the time I would type twice a week.

Student J: I really did not have a plan per se. I would type whenever I would have free time. But I would be typing and then I would get cut off. I would not have enough time to start over again so I would come back to it later. I did not have a set schedule.

10a. Please describe your interactions with the course instructor.

GALLAUDET STUDENTS

Student A: I had a lot of interaction with him. He would respond quickly and explain things clearly. For example, I had a questions about the term paper. He responded to me quickly.

Student B: I did not have a lot of interactions with him. I would get the assignments from him and that is all. He would respond to me but that is it.

Student C: He would ask educational questions, and we would answer. We were more personal when we had to evaluate the class.

Student D: Yes, I did have good interactions with him. If we had any questions for him we could feel free to ask him. He would usually respond within a few hours. If I would make a mistake, he would say that we are all human and we all make mistakes.

NTID/RIT STUDENTS

Student E: Pretty good. I would write my reply. Also, if I had a question, it typed it in and he would answer me by the next day. At the beginning of the class, he gave a sheet with different ways to contact him. He sent individual letters to some people to see how they were doing.

Student F: I never saw the teacher. He gave good information at the beginning of the week. But then, there was not any interactions. Too impersonal.

Student G: The instructor was wonderful. He stayed out of one discussion on CODA (children of deaf adults) because he was involved with it. He wanted the others to discuss it. He was very helpful. He showed us how to write a paper on the computer and gave us positive feedback.

Table 4 (cont.)
Summary of Student Interviews

Questions and Complete Responses*

Student H: I talked to him through email. It was very superficial. If it was a regular style classroom, I could have face-to-face meetings with him, conversations would be more serious. It limits your creativity when you cannot express feelings in person.

Student I: I had a lot of interactions with the instructor. He is a very nice person. He is also easy to talk with.

Student J: I did not have any interactions with him. Sometimes he would give me feedback, though. Sometimes it was helpful and other times I already knew what he told me.

10B. Please describe your interactions with the resource person.

GALLAUDET STUDENTS

Student A: Yes, sometimes I needed more information and he would explain it to me.

Student B: In the beginning of the course I asked for help from him because the videotapes were not working properly. he had the problem fixed for us. After that I did not have any contact with him because I understood the information myself.

Student C: I thought he was very helpful. he showed and explained everything to the students.

Student D: I thought he was good. I would go to him and ask questions if I could not get in touch with Norman.

NTID/RIT STUDENTS

Student E: There was none (Because Norm is at RIT).

Student F: He was not very helpful. The first day it was too brief of an explanation of what is to happen. Also, I tried to have him help me with the term paper. But he wasn't helpful. I had to go to a different deaf professor unrelated to this class for help.

Student G: Nothing. No help. I never used him. I tried to find his office once but could not find it. He did not know how to teach. He just handed out the paper. He did not explain the class or what to expect. We got that information from the teacher.

Student H: He was helpful. He gave us a lot of information on what to do and expect. It was enough information.

Student I: I had no contact with him. I prefer direct contact with the teacher.

Student J: I only met him once. He was not very helpful. If I had a question, I would ask the teacher, not the resource person. I felt more comfortable asking the teacher. I did not receive enough information at the first meeting. It should have been longer.

11C. Please tell me what you learned most from this course about: your instructors and peers.

GALLAUDET STUDENTS

Student A: I learned a lot from my peers and instructors. I liked the students opinions, points of view, etc.

Student B: I liked the opinions, philosophies, etc...of the other students and instructor. I learned a lot. I noticed we had some similar opinions. some of us disagreed but that made it interesting.

Student C: I learned a lot from the other students and the instructor. I related things that happen today to the things that happened in the past. I liked reading the opinions, etc.. of the other students.

Student D: I learned how to debate better. It was a good challenge. I learned how to disagree with people and not feel bad.

Table 4 (cont.)
Summary of Student Interviews

Questions and Complete Responses*

NTID/RIT STUDENTS

Student E: I learned a lot. There were a lot of deaf people in my class and they come from so many different places. They bring in a lot of different opinions. Whereas, the RIT students are mainly local people. It was interesting reading comments from the people from the southern states.

Student F: I prefer in-person classes. Interesting what others said but too impersonal.

Student G: I liked everyone. I just wish they had a picture of everyone on the vax so I would know what everyone looked like. I thought my professor was young until I saw all his credentials. Then I guessed he was older. I learned about what my professor does, his job. He does a lot of research.

Student H: I learned a lot. They had good input. then I would add good points, too. So we were equal in sharing information. the professor was not equal with his praise, though. I would make some good points and he would never acknowledge them. He would to other students. But never to me. That was not fair.

Student I: We had two different perspectives. The deaf students were excited that more deaf individuals are on TV, like the new show, "Reasonable Doubts" where Marlee Matlin is a lawyer. But the hearing students feel lit is an insult and not true.

Student J: The feedback was sometimes boring and sometimes good. It varied from week to week.

11d. Please tell me what you learned most from this course about: your learning style and needs. Did you learn easily using this method?

GALLAUDET STUDENTS

Student A: I learned as I went along.

Student B: I learned the same as in the regular class. It was not easier.

Student C: Yes

Student D: I learn the same in both types of classes.

NTID/RIT STUDENTS

Student E: Yes

Student F: No.

Student G: Yes.

Student H: No. I prefer face-to-face.

Student I: Yes.

11f. Is this a method which you would use again?

GALLAUDET STUDENTS

Student A: Yes, I would take this kind of class again.

Student B: Maybe, if it is an interesting course.

Student C: Yes, because I get a lot of free time to do my work when I want to do it.

Student D: Yes

Table 4 (cont.)
Summary of Student Interviews

Questions and Complete Responses*

NTID/RIT STUDENTS

Student E: Yes, I hope there is a class like this next quarter.

Student F: No.

Student G: Yes.

Student H: No. I would take the same class but not through the vax.

Student I: Yes.

Student J: No. I liked the class itself, but not on the vax.

12. What future applications do you see for courses taught this way?

GALLAUDET STUDENTS

Student A: History class would be good taught this way. Maybe Afro-American and American History classes would be good to compare the two histories.

Student B: I think a history class would be good because you don't need a teacher for history. You can just read the book. Communications may be another good example. Also, classes that don't need a lot of explanations would be good through the Vax.

Student C: History classes would be good because they are easy. All you have to do is read the book, watch the videotapes. You don't need the teacher's help that much. English would be good too because we could all help each other with our grammar. We can correct each others grammar and mistakes and help edit. For math, no way. You need too much teacher feedback.

Student D: Sociology, Psychology, classes related to history, Civil life, Deaf life...Not biology, it is too complex.

NTID/RIT STUDENTS

Student E: I don't believe it would be good for any of the courses in my major, biotech, because it is too technical. Discussion type classes may be a good idea. Possibly American History as long as you don't use the traditional text. It would need to be in the form of true stories so there would be something to discuss.

Student F: None

Student G: Math would be interesting. I would like to have engineering classes on the computer. It is difficult sometimes to have to watch the interpreter and sometimes I miss things. I wish the teacher would sign for himself or have it on the computer. I prefer between the teacher and me or me and the computer. I do not like the middle person.

Student H: I cannot think of any.

Student I: Psychology of Deafness would be a good course, it forces you to analyze on your own and read more. for other examples, I am not sure.

Student J: I don't feel there are any good applications. A lot of the other students feel the same. We just get cut off too often.

Interviewer Feedback

The graduate student who interviewed the ten students was asked to record her observations concerning the students, particularly those observations related to the students comfort with the technology of distance learning.

It was the interviewer's opinion that the RIT students were less satisfied with the courses than the Gallaudet students, even though students from both colleges had complained about the time delays in having discussions via computer. The interviewer also had the impression:

> The students who prefer to work alone, and are more shy than others, tended to appreciate this class style more. For example, one student mentioned that she felt she could get more involved in the discussions on the vax than in a regular classroom situation. She said she becomes very nervous when other people turn to look at her in class. Some students felt they could be more open and talk a bit more freely.
>
> On the other hand, some students from NTID said they prefer the regular classroom because the students can see each other's ... facial expressions and body language. All that is lost on the vax. Also, students mentioned that the "heated debate' is dampened on the vax. If a student has to wait a few days for a response, the rebuttal tends to be less involved and emotional.

When the interviewer was asked to offer personal opinions about such courses in the future, the recommendation was made to use this delivery system for controversial and discussion courses, not those that are "technical or purely factual... courses that need a lot of teacher explanation would not be as successful." Other benefits noted were anonymity of the discussant and the freedom to enter a discussion at any time of day.

Instructor's Comments and Recommendations

Both instructors viewed the pilot experience a success. Students did participate in the discussions and developed rapport, although the instructor's differed in their view of the adequacy of the amount of contributions from the students.

One instructor felt that the discussion was qualitatively better than in a traditional classroom and attributed this in part to the fact that the delivery system encourages reflection before responding. The delivery system also is text-dependent, thus enhancing deaf students' English skills. This advantage was heightened by the inter-university interactions.

The negative aspects noted by the instructors was the slow process of interacting through Internet. They also mentioned the need for better availability of materials (orientation to computer conferencing, making sure students are aware at the outset that the course is computer-based, having the same course materials available on both campuses).

The course's major strength was in the flexibility it allowed students. For those students who are off-campus, need a flexible schedule and who would not otherwise have access to content specialists in certain subject areas, and who are motivated and have a self-disciplined learning style, tend to be the ones who are most satisfied with and benefit from the delivery system. Students who are on-campus and accustomed to the structure found in a traditional classroom are often less satisfied and less successful.

Recommendations for future courses using this means of instructional delivery include periodic contacts with instructional faculty and students in order to preserve the human interaction aspects. In this way, computer conferencing provides an excellent way to supplement discussion-based courses by providing the means for freer and less inhibited discussions.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The goal of the formative evaluation was to elicit as much information as possible that would be of use to both the instructors of the course and other people throughout the RIT and Gallaudet campuses who might contemplate using this type of instructional delivery system in the future. As a result it was important to collect more information than that from a traditional end of course student rating form. The evaluators interviewed students from both campuses and also solicited the perceptions of the course instructors and the graduate student who conducted the interviews.

CONCLUSIONS:

- Both faculty and students agreed that at times, the technology itself (Internet) was cumbersome, slow and unreliable. Students were particularly frustrated with long wait times for responses to their questions and continued dialogue about an issue.

- Both faculty and students previously unfamiliar with the VAX agreed on the need for better availability of materials and training in the use of the Internet system.

- Students divided themselves into two basic groups:

  (a) those who enjoyed and were satisfied with the delivery system and stated they would be happy to enroll in another teleconferencing course and

  (b) those who were not satisfied and stated they had no intention of enrolling in another such course.

- The students who were most dissatisfied with the instructional delivery system said they prefer face-to-face discussions where they can watch facial expressions. The students from each institution who had the least satisfaction said that they are intimidated by computers, that computer use interferes with their social activities, and that they did not have the background skills for the course. None of the most satisfied students reported intimidation or social interference, and all but one said that they had the background skills for the course. The dissatisfied students self-reported more need for feedback, less adaptability, not viewing the self as studious and as working carefully, and as thinking too much about their limitations.

- Both faculty and students who enjoyed the courses agreed that a major strength of the delivery system was the flexibility and control over the use of time afforded the student.

- However, those students who were not satisfied with the delivery system did not perceive such flexibility as a benefit and missed the structure of regular classes and the support of peers.

- Students who were not satisfied with the delivery system also missed the face to face contact with instructors and peers. In several cases, communication via the computer was not perceived as "real" interaction. "I never say the teachers....there was not any interactions. Too impersonal."

- Faculty recognized that students will vary in the prerequisite cognitive and psychological characteristics necessary to successfully participate in such courses.

- Students seemed to feel more positive about interactions with their peers than with their instructor. Almost all the students said they enjoyed reading the different opinions from the other students.

RECOMMENDATIONS:

- Students need to be informed before registering for the course that it will be offered via computer and that face-to-face contact with faculty and other students will be minimal. The method of so informing students may vary from course to course or campus to campus, but it is important that the information be available to potential students to allow them to decide if such an instructional delivery system matches their learning styles and preferences.

- The technology or instructional delivery system itself needs modification. The Internet system is not yet an efficient one and the delays students experienced proved to be very frustrating. Several students commented about losing the comments they typed. This could have been prevented had the students been instructed to first create a document in a text file and then send that file via Internet.

- The selection of resource persons is very important. Only those individuals who are familiar with and frequent users of the vax, are informed regarding the course content, have experience with this instructional delivery system, and are willing to be available to students, should be selected as resource persons.

In summary, those students who were satisfied seemed to enjoy the course content and delivery; less satisfied students experienced the delivery method as a barrier to course participation and to their learning of the course material.

CAUTIONS:

It is important to note that the conclusions and recommendations found in this report are based on surveys and interviews with a limited number of students. Ten students were interviewed, and eight returned end-of-course student rating forms. It is also important to note that the majority of the students who participated in the interviews were **not** on the same campus as the instructor. In other words, only one RIT student enrolled in **Black Civil Rights in the Twentieth Century** was interviewed, and no Gallaudet students enrolled in **Mass Media and Deafness** weres interviewed. Finally, only one of the ten interviewees was hearing and we were not able to contact any of the students who dropped out of either of the courses. The results should therefore be interpreted with caution.

APPENDIX A

COPY OF INSTRUCTIONAL RATING SURVEY

STUDENT RATING OF NTID - GALLAUDET JOINT COURSES VIA COMPUTER CONFERENCING

Please answer the following questions about yourself

1. What is your current major?_____

2. What degree do you expect to earn?_____

3. How old are you? (circle the correct answer)

   a. 17 or under
   b. 18 - 25
   c. 25 or over

4. What is your sex? (circle the correct answer)

   a. Female
   b. Male

5. Are you: (circle all that apply)

   a. deaf
   b. hearing
   c. physically disabled

7. Why did you take this course? (check all that apply)

   a. I was interested in the topic
   b. I wanted to take a course "by computer"
   c. I wanted to take a course with Gallaudet and RIT Students
   d. I couldn't find a regular course to fit my schedule.

8. What is your preferred way of communicating? (Circle all that apply)

   a. speech
   b. signed English
   c. ASL
   d. writing
   e. other_____

9. In my opinion? (circle one)

   a. I worked harder in this course than in most other courses I have taken.
   b. I worked about the same in this course compared to other courses I have taken.
   c. I did not work as hard in this course as in most other courses.

The Remainder of this Questionnaire asks about the Course you have just finished. Please circle the letter that best describes how you feel.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
To what extent will this course help you in the future?						
1. This course will help me when I get a job.	A	B	C	D	E	NA
2. This course will help me in some of my other courses.	A	B	C	D	E	NA
3. In this course I learned new ways of solving problems for class and for work.	A	B	C	D	E	NA
4. In this course I learned some new skills.	A	B	C	D	E	NA
5. I learned a lot of information and facts in this course.	A	B	C	D	E	NA
How did the course help you personally?						
6. This course helped me to learn more about myself.	A	B	C	D	E	NA
7. This course made me think more about many of my own ideas and feelings.	A	B	C	D	E	NA
8. I talked with other students about things I had learned in class.	A	B	C	D	E	NA
9. This course helped me to understand more about myself.	A	B	C	D	E	NA
10. This course helped me to understand my own strengths.	A	B	C	D	E	NA
How difficult was the course?						
11. The course was too hard.	A	B	C	D	E	NA
12. There was too much work.	A	B	C	D	E	NA
13. The tests were too hard.	A	B	C	D	E	NA
14. It was difficult to learn all the information.	A	B	C	D	E	NA
15. It was not always clear to me what I was supposed to do for class.	A	B	C	D	E	NA
What was the teacher like?						
16. The teacher was an enthusiastic and warm person.	A	B	C	D	E	NA
17. The teacher was very interested in the students.	A	B	C	D	E	NA
18. The teacher really wanted to see the whole class improve.	A	B	C	D	E	NA
19. The teacher was interesting.	A	B	C	D	E	NA
20. The teacher praised good work.	A	B	C	D	E	NA
To What extent was the teacher clear, organized, and understandable?						
21. The teacher(s) explained the class concepts clearly.	A	B	C	D	E	NA
22. The teacher(s) used appropriate examples.	A	B	C	D	E	NA
23. The teacher(s) explained new words and new ideas very well.	A	B	C	D	E	NA
24. The teacher answered questions clearly.	A	B	C	D	E	NA
25. The teacher helped create a good feeling during the computer discussions.	A	B	C	D	E	NA

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
How much did you enjoy taking a course via the computer?						
26. I felt comfortable communicating through the computer.	A	B	C	D	E	NA
27. I missed seeing other students in face-to-face situations	A	B	C	D	E	NA
28. I sometimes felt isolated only talking to a computer.	A	B	C	D	E	NA
29. I enjoyed sharing ideas with students from another college.	A	B	C	D	E	NA
30. The video tapes and other media used by the teacher added to the value of the course.	A	B	C	D	E	NA
How did this computer course compare to regular classroom courses?						
31. I thought it was easier to communicate using the computer than in a regular classroom.	A	B	C	D	E	NA
32. I felt I had more interaction with my teacher in this course than in other courses I have taken.	A	B	C	D	E	NA
33. I felt I had more interaction with other students in this course than in other courses I have taken.	A	B	C	D	E	NA
34. It was up to me to manage my time more in this course.	A	B	C	D	E	NA
35. It was more difficult for me to keep up with assignments in this course.	A	B	C	D	E	NA
How valuable was the Resource Person?						
36. I felt it was important to have the Resource Person on campus.	A	B	C	D	E	NA
37. The Resource Person helped me keep up with the course.	A	B	C	D	E	NA
38. It was easy to meet with the Resource Person whenever I needed help.	A	B	C	D	E	NA
What is your overall evaluation of this course?						
39. This was an excellent course.	A	B	C	D	E	NA
40. I would tell my friends to take a "computer conferencing" course.	A	B	C	D	E	NA
41. I would like to take another course in the same way.	A	B	C	D	E	NA

ANYTHING ELSE?

Please write any general comments, concerns, or suggestions about improving this course below.

APPENDIX B

COPY OF INTERVIEW PROTOCOL

Protocol for the Student Post-course Interview

RIT/Gallaudet University Project on the Instructional Application of Computer Conferencing Technology

M. Scherer, Fall '91

The interview is open-ended and loosely formulated so that as much undirected information can be elicited as possible. The object is to facilitate rather than to direct the responses.

Name _____ **Date** _____

Student is _____ **deaf** _____ **hearing**

Major _____

This past quarter you took a course [Black Civil Rights in the Twentieth Century/Mass Media and Deaf History]. This was the first time this course was taught through telecommunications and interactive computer dialoging with students here and at Gallaudet University.

We are very interested in learning how this course worked out for you and learning your opinions on how to make this course and others taught in the same way better. I have just a few questions to ask you.

1. Why did you register for this particular course?

   Any other reasons?

2. Please think back to your first group meeting about this course. What did you expect it to be like?

How did your expectations and opinions of it change over the quarter? What do you think most changed your opinion?

4. Overall, are you glad that you took this course as far as its content is concerned? Why or why not?

5. How well do you believe you achieved the goals of the course?

6. Are you glad that you took it as far as the <u>way</u> it was taught? Why or why not?

7. How was this method better or worse than the traditional classroom style of learning as far as you, yourself, are personally concerned?

   Better:

   Worse:

8. Please tell me about what this course was like for you as far as the need to work independently and with no traditional classroom interaction.

9. What did you do to structure and pace the coursework in order for you to meet the course requirements?

10. Please describe your interactions with:

    1. The course instructors

    2. The resource person

11. Please tell me what you learned most from this course about:

    1. The content of the course

    2. Your attitudes toward the subject matter of this course

    3. Your instructors and peers

4. Your learning style and needs (Probes: Did you learn easily use this method? Is this a method which you would use again? Do you prefer to learn from listening to a lecture or by reading a textbook? Do you prefer to work alone or with a group? Do you prefer to watch a demonstration or experiment on your own?)

12. What future applications do you see for courses taught this way?

Any others?

Now please look at this page listing a variety of student characteristics. Please circle all the statements that describe you. (Hand student next page).

Student Characteristics of

_____

(Please print your name)

Please CIRCLE ALL statements that describe you:

I am curious and excited about new things	I sometimes need frequent feedback	I sometimes feel intimidated by computers
I am impatient	I accept my teacher's advice about a course	I sometimes am easily distracted
I receive criticism well	I feel confident	I am sometimes easily bored
I move from task to task easily	My physical dexterity is good	Most of the time I am prepared
I like to have the teacher's attention	I would describe myself as studious	I sometimes feel anxious
I often want to work slower/ faster than the rest	I have a cooperative attitude	Computer use often interferes with my social activities
I work carefully	I am sometimes critical	I prefer to work alone
I have the background skills for this course	I believe using a computer is fun	I am motivated to learn
I sometimes think too much about my limitations	I want to control my own learning pace	I think I'm flexible
I sometimes need frequent reinforcement	I work with precision	I think I'm adaptable
I prefer to watch a demonstration than to experiment on my own	I prefer to read a textbook than to listen to a teacher's lecture	I prefer to work in a group than to work alone

Please list other characteristics that describe you as a learner in this course:

_____

_____

Interviewer Notes and Impressions:
[Include student's level of comfort, general affect, assessment of genuineness, and such problems as distractions during the interview, communication difficulties, etc.]

APPENDIX C

ADDITIONAL INFORMATION FROM INSTRUCTIONAL RATING SURVEY

AND FROM INTERVIEWS

Table C-1

Student Ratings of Computer Conferencing Courses

	Frequency of Responses				
	Strongly Agree or Agree	Not Sure	Strongly Disagree or Disagree	Not Applicable or Omits	Item Mean
To what extent will this course help you in the future?					
1. . This course will help me when I get a job.	50.0%	25.0%	0	25.0%	3.75
2. This course will help me in some of my other courses.	50.0%	25.0%	12.5%	12.5%	4.33
3. In this course I learned new ways of solving problems for class and for work.	50.0%	25.0%	25.0%	0	3.38
4. In this course I learned some new skills.	87.5%	12.5%	0	0	3.88
5. I learned a lot of information and facts in this course.	87.5%	12.5%	0	0	4.25
How did the course help you personally?					
6. This course helped me to learn more about myself.	50.0%	25.0%	12.5%	12.5%	3.86
7. This course made me think more about many of my own ideas and feelings.	75.0%	25.0%	0	0	4.13
8. I talked with other students about things I had learned in class.	50.0%	25.0%	37.5%	0	3.13
9. This course helped me to understand more about myself.	50.0%	12.5%	25.0%	12.5%	3.29
10. This course helped me to understand my own strengths.	50.0%	12.5%	37.5%	0	3.25
How difficult was the course?					
11. The course was too hard.	12.5%	12.5%	75.0%	0	2.13
12. There was too much work.	12.5%	37.5%	50.0%	0	2.50
13. The tests were too hard.	0	37.5%	50.0%	0	2.00
14. It was difficult to learn all the information.	37.5%	12.5%	37.5%	12.5%	2.71
15. It was not always clear to me what I was supposed to do for class.	50.0%	25.0%	25.0%	0	3.25

Table C-1 (Cont)
Student Ratings of Computer Conferencing Courses

	Frequency of Responses				
	Strongly Agree or Agree	Not Sure	Strongly Disagree or Disagree	Not Applicable or Omits	Item Mean
What was the teacher like?					
16. The teacher was an enthusiastic and warm person.	87.5%	12.5%	0	0	4.50
17. The teacher was very interested in the students.	87.5%	12.5%	0	0	4.50
18. The teacher really wanted to see the whole class improve.	87.5%	12.5%	0	0	4.38
19. The teacher was interesting.	100%	0	0	0	4.75
20. The teacher praised good work.	87.5%	12.5%	0	0	4.25
To What extent was the teacher clear, organized, and understandable?					
21. The teacher(s) explained the class concepts clearly.	62.5%	12.5%	12.5%	0	3.71
22. The teacher(s) used appropriate examples.	87.5%	12.5%	0	0	4.13
23. The teacher(s) explained new words and new ideas very well.	75.0%	12.5%	0	12.5%	4.29
24. The teacher answered questions clearly.	75.0%	25.0%	0	0	4.25
25. The teacher helped create a good feeling during the computer discussions.	75.0%	12.5%	12.5%	0	4.00

TABLE C-2

Additional Student Responses from Interviews

Questions and complete responses

4. Overall, are you glad that you took this course as far as its content is concerned? Why/why not?

GALLAUDET STUDENTS

Student A: Yes, I learn a lot more about Civil rights. I liked the videotapes like "Eye on the Prize" and all the pictures.

Student B: Yes, I feel very good about it. In high school I learned superficial things about Civil rights and Black history but in the course, we went beyond the surface information.

Student D: Yes, I learned so much about boycotts, etc...related to Black history. For example, how whites treated Blacks.

NTID/RIT STUDENTS

Student F: Yes, the information was interesting. It made me think. But I really became unmotivated because of the vax. I would get disconnected on the vax. I would have to start all over again. It was very frustrating.

Student G: I learned a lot. Every time I learned something new, I would tell my roommates. The information I found out about the deaf community a long time ago was very interesting. I never thought about it before.

Student H: Yes, I learned a lot about deaf history in mass media.

Student I: Yes, I was very satisfied with the films and the mini-lectures were very good. But there was not enough discussion. Plus, as the weeks went by, the number of students' responses decreased.

Student G: I liked the information. I enjoyed the class. It was very interesting information. I learned a lot about deaf actors and actresses from a long time ago.

5. How well do you believe you achieved the goals of the course?

GALLAUDET STUDENTS

Student A: Yes, I did achieve the goals of the class. I learned about everything that was asked of us.

Student B: I feel I was very successful in achieving the goals. I did what was asked.

Student C: Yes, I did achieve the goals.

Student D: Yes, I did learn about all the goals.

NTID/RIT STUDENTS

Student E: Yes

Student F: Not very well, because of the vax. I prefer the teacher lecturing. I need more interaction with others to help me with things.

Student G: I achieved the goals. I am satisfied with it.

Student H: I achieved the goals of the class.

Student I: I achieved the goals of the class.

Student J: Half and half. When I would write, the teacher thought that I needed to analyze things more. It was frustrating going back to the paper and reanalyzing it. It took such a long time. It was too much and too much time. Staying within the same four walls for a long time was boring.

TABLE C-2 (cont.)
Additional Student Responses from Interviews

Questions and complete responses

11a. Please tell me what you learned most from this course about: the content of the course..

GALLAUDET STUDENTS

Student A: I learned about the NAACP, SLC and the difference between the two. I also learned about the protests and Civil rights.

Student B: I learned about the movements and protests, CLC, MLK's philosophy and many different groups. I liked learning about the different groups and their philosophies.

Student C: This class changed me a lot. I learned more than I did in high school. High school offered superficial information about Black history only.

Student D: I learned about the Civil rights movement.

NTID/RIT STUDENTS

Student E: I learned about the struggles people went through and also how much we were not told in other books and media.

Student F: No answer.

Student G: I learned about deaf history, the community, culture, media and what is happening today in the media with the deaf. We are working on term papers related to what we have learned.

Student H: I did not know that there were any movies with deaf people before "Children of a Lesser God." Very interesting.

Student I: It was very powerful information. Mass media and how mass media changes the role of the deaf person. It follows the traditions and philosophies of deaf education. For example, during the era of oralism, all of the deaf actors/actresses were portrayed as oral and could lip read. But that has changed now since ASL is becoming an accepted practice.

Student J: It was my first time taking a course like this. It was very interesting to me. I want to take more courses in deaf history.

11b. Please tell me what you learned most from this course about: your attitudes toward the subject matter of this course.

GALLAUDET STUDENTS

Student A: I had a good attitude towards what I learned.

Student B: I had a positive attitude towards the class. The book was very interesting. I learned a lot about Black history.

Student C: I had a positive attitude. I wanted to learn more about Black Civil rights. I really liked the class.

Student D: I had a positive attitude. I was very supportive of the ideas of the class itself. I liked the information.

NTID/RIT STUDENTS

Student E: I got so much out of this class. Now, everyday, I look in the newspaper and I can relate it to the class.

Student F: Interesting information.

Student G: I enjoyed it. It was very interesting.

Student H: I tried to solve the debate but not on the vax. In the classroom I can solve the debates though because it is face-to-face.

Student I: My attitude was positive. I really enjoyed learning about all the information.

Student J: I wish we had group discussions weekly. It would be more challenging. Using just the vax is not enough. The feedback wasn't enough.

APPENDIX D

INFORMATION CONCERNING THE RESEARCH QUESTION:

CHARACTERISTICS OF STUDENTS WHO WERE AND WERE NOT SATISFIED WITH THE DISTANCE LEARNING TECHNOLOGY

INTRODUCTION

We know that not all students profit equally from a single instructional approach or method of instructional delivery. As part of the evaluation of these pilot telecourses, we were curious about the differences between the most satisfied students and the least satisfied students and how their degree of satisfaction related to differences in learning styles or preferences and their predispositions to and experiences with the vax and teleconferencing.

During the interview, several questions asked students to discuss their learning preferences. The data from these questions are listed in Table D-1. Also during the time of the interview, students were asked to complete the "learner [personal] characteristics" portion of the **Educational Technology Predisposition Assessment (ETPA)** (Scherer, McKee, & Young, 1990). The interview data from several questions about the instructional delivery system served to identify the students who were either satisfied or dissatisfied with it. The **ETPA** data provided by these two groups of students were then looked at (see Table D-2) to get a beginning view of criteria that distinguish satisfied and dissatisfied students.

RESULTS

Since the number of individuals interviewed is small (a total of 10 students), the data analysis is descriptive only.

Three students were identified as having been dissatisfied with the instructional delivery system. It must be remembered, however, that all students interviewed completed the course; we do not know the factors that were involved in student decisions to withdraw from the courses.

The students who were most dissatisfied with the instructional delivery system and said they prefer face-to-face discussions where they can watch facial expressions. The students from each institution who had the

least satisfaction said that they are intimidated by computers, that computer use interferes with their social activities, and that they did not have the background skills for the course. None of the most satisfied students reported intimidation or social interference, and all but one said that they had the background skills for the course. The dissatisfied students self-reported more need for feedback, less adaptability, not viewing the self as studious and as working carefully, and as thinking too much about their limitations.

Table D-1

Interview Data Regarding Learning Preferences

Questions and complete responses

11G. Do you prefer to learn from listening to a lecture or by reading a textbook?

GALLAUDET STUDENTS

Student A: I prefer to learn via lectures, group discussions, and textbooks. They all help me. I do not prefer just one style.

Student B: I prefer to listen to a lecture because the teacher explains it more clearly. You get limited information from a book.

Student C: I prefer to listen to a lecture. The teacher explains things clearer. If I have any questions the teacher can clarify. Also, the teacher can add interesting info to the discussion and the lecture.

Student D: If the info is more complicated, then I prefer a lecture so the teacher can explain everything clearly. But if the topic is more social, then I can read it from a book and understand.

NTID/RIT STUDENTS

Student E: I think I would learn just as much from a lecture-style with this professor. But with other Prof's, it may be better with reading a test.

Student F: Listening to a lecture.

Student G: It depends. Sometimes I prefer a lecture; other times I prefer reading a book.

Student H: Both. The lecture explains things, then the book goes into more detail.

Student I: I prefer to read a textbook.

Student J: I prefer them both plus open group discussions. I don't like just one way. They are all beneficial.

11H. Do you prefer to work alone or with a group?

GALLAUDET STUDENTS

Student A: I prefer both. I prefer to read alone. But I prefer to have discussions in a group.

Student B: I feel more comfortable working alone. I don't know why, I just prefer it that way. I have more time, I can do what I want. I can focus more too.

Student C: I prefer to work alone. It takes too much time to discuss things, cooperate and solve problems. I prefer just my opinion.

Student D: I prefer to work alone. Otherwise people in a group share too much. I prefer to do what I want to do and whatever I feel like.

Table D-1 (cont.)

Interview Data Regarding Learning Preferences

Questions and complete responses	

NTID/RIT STUDENTS

Student E: I prefer to work along. I am a conscientious worker and prefer to be responsible for it.

Student F: With a group.

Student G: It depends again. Sometimes I prefer working with a group.

Student H: I prefer alone. But I will participate in group discussions.

Student I: I prefer to work alone. I grew up alone and I am very independent. I can focus a lot easier if I am alone.

Student J: I prefer to do individual work. It wastes my time working in a group. Although, I can share within a class, I prefer to work alone.

11I. DO YOU PREFER TO WATCH A DEMONSTRATION OR EXPERIMENT ON YOUR OWN.

GALLAUDET STUDENTS

Student A: I prefer to participate. I feel more comfortable that way.

Student B: I would participate a little. But I feel more comfortable watching. Maybe if I participate I will learn more sometimes. But I feel more comfortable watching.

Student C: I prefer to participate because I learn more from other students. But it depends on the course. In English class, for example, I prefer to work alone. But if I have to do some public speaking, then I prefer with a group so we can discuss ideas.

Student D: I prefer to sit back and watch others. I hate to be involved with others. I don't know why. Involvement in sports is fine because it is more action-oriented. But school is more boring.

NTID/RIT STUDENTS

Student E: I prefer being involved.

Student F: It depends if I am interested or not. If I am interested, then I will participate. But if I am not interested, then I prefer to watch others do it instead.

Student G: I like to watch first. Then I like to help others after I see what is wrong.

Student H: I like to be involved. It is more challenging.

Student I: I prefer to work on my own and watch what others are doing.

Student J: I prefer both. For example, I will sit and watch first what is going on. Then I will participate.

Table D-2

Characteristics of Students Who Were Satisfied or Dissatisfied with Teleconferencing

Characteristics	Number (and Percent) of Students Choosing Adjective to Describe Themselves	
	Satisfied students (N=7)	Dissatisfied students (N=3)
I am curious and excited about new things	6(86%)	3(100%)
I sometimes need frequent feedback	4(57%)	3(100%)
I sometimes feel intimidated by computers	0	3(100%)
I am impatient	1(15%)	0
I accept my teacher's advice about a course	6(86%)	1(33%)
I sometimes am easily distracted	3(43%)	2(67%)
I receive criticism well	3(43%)	2(67%)
I feel confident	3(43%)	2(67%)
I am sometimes easily bored	3(43%)	2(67%)
I move from task to task easily	4(57%)	2(67%)
My physical dexterity is good	3(43%)	1(33%)
Most of the time I am prepared	4(57%)	1(33%)
I like to have the teacher's attention	4(57%)	2(67%)
I would describe myself as studious	3(43%)	0
I sometimes feel anxious	5(71%)	3(100%)
I often want to work slower/ faster than the rest	3(43%)	2(67%)
I have a cooperative attitude	5(71%)	2(67%)

Table D-2 (cont.)

Characteristics of Students Who Were Satisfied or Dissatisfied with Teleconferencing

Characteristics	Number (and Percent) of Students Choosing Adjective to Describe Themselves	
	Satisfied students (N=7)	Dissatisfied students (N=3)
Computer use often interferes with my social activities	0	2(67%)
I work carefully	3(43%)	0
I am sometimes critical	4(57%)	2(67%)
I prefer to work alone	5(71%)	1(33%)
I have the background skills for this course	6(86%)	0
I believe using a computer is fun	5(71%)	2(67%)
I am motivated to learn	5(71%)	3(100%)
I sometimes think too much about my limitations	2(29%)	3(100%)
I want to control my own learning pace	5(71%)	2(67%)
I think I'm flexible	6(86%)	3(100%)
I sometimes need frequent reinforcement	2(29%)	1(33%)
I work with precision	1(15%)	1(33%)
I think I'm adaptable	6(86%)	1(33%)
. . .		
I prefer to watch a demonstration than to experiment on my own	2(29%)	2(67%)
I prefer to read a textbook than to listen to a teacher's lecture	1(15%)	0
I prefer to work in a group than to work alone	1(15%)	2(67%)